

REMARKS/ARGUMENTS

Applicants are appreciative of the telephone discussion with Examiner Truong and applicants' representative on October 16, 2006 to discuss the Draft Second Amendment After Final, from which this document was prepared. As discussed in the telephone discussion, this Second Amendment After Final is presented in response to the Advisory Action mailed August 28, 2006. A Notice of Appeal was filed August 15, 2006 with respect to the Final Office Action mailed May 15, 2006. The Advisory Action indicated that the amendment to the claims was entered, but did not place the claims in condition for allowance.

Examiner Truong kindly agreed to entertain another Amendment After Final in the interest of moving this case forward to resolution. During the telephone discussion on October 16, the Examiner agreed that the claim amendments for the "configuration table" appears to distinguish over the pending Office Action, but indicated that a further search would likely be needed, and the Examiner requested specific citation in the specification to support the claim amendments relating to the configuration table.

Support for the Claim Amendments

In the drawings, the configuration table 206 is illustrated in Fig. 2 and is further illustrated in Fig. 4. The operation of the system is illustrated in Fig. 3 and the accompanying specification at page 6, line 18 through page 7, line 8. The system checks the configuration table 206 "to determine a port having sufficient communication speed for the capabilities of the logical disk" (page 7, lines 3-5), after which the configuration table is updated. The new claims (claims 34-36) relate to details of the configuration table and are described in the specification as references above.

The Rejection Over Kitamura and the Amended Claims

In the pending Office Action, claims 23-27 and 29-33 were rejected as anticipated by the patent to Kitamura, and claim 28 was rejected as obvious over the combination of Kitamura and the patent to Napolitano (claims 1-22 and 25 have been withdrawn from further consideration).

This Second Amendment After Final proposes changes to each of the independent claims to add a "configuration table" component. As noted in the specification as referenced above, the configuration table contains communication speed information, from which data path selection occurs. The dependent claims 34, 35, and 36 are added to further define the data contained in the configuration table. No new matter has been added.

Applicants previously noted that the invention involves selecting between disks and I/O ports based on connection speed. In the Advisory Action, the Examiner stated that the Kitamura reference shows this feature. The Examiner asserted that Kitamura discloses using a "higher transfer rate", which the Examiner described as equivalent to selecting a higher connection speed. In accordance with the claims as amended by this Second Amendment After Final, all the independent claims (claims 23, 29, 30) refer to a "configuration table" containing communication speed information, from which a data path is selected based on data path communication speed information of the configuration table. It is submitted that Kitamura does not show this feature.

For example, Kitamura at column 13, lines 34-38 and 48-50, as well as at column 6 and column 7 relating to Figure 18, describes disk clusters 26 that are connected to each other by a connecting mechanism 27. Meanwhile, a channel processor 23' and a drive processor 22' within a cluster 26 are connected to each other by a bus 28. The internal bus 28 is faster than the connector mechanism 27 between clusters (col. 13, lines 34-38). Kitamura notes that, on principle, the channel processor 23' of a cluster 26 manages the disk units 21 of the cluster because communication between the processors 23', 22' of a cluster is faster than communication between clusters over the bus 28 (col. 13, lines 50-56).

Kitamura also notes that, if a channel processor 23' in a given cluster 26 fails, data communication for disks 21 of that cluster are routed through a channel processor of another cluster (col. 13, lines 56-63). That is, the data path taken is through the data bus 28 to another cluster, and then to the properly addressed disks 21, rather than through the broken connection over the connecting mechanism 27. This alternate path routing, however, does not meet the claim language.

The claims as amended call for allocating among data paths "based upon a data rate capability" of the data path determined from communication speed information in a data configuration table. Kitamura does not allocate among data paths based on data rate capability from a configuration table. As noted previously, Kitamura does not know the data path speed. In Kitamura, if all data paths are available (that is, all channel processors are working), then Kitamura uses the default path that routes from the disks 21 of the addressed cluster 26 to the channel processor 23' of that cluster. If a channel processor of a cluster is unavailable, then Kitamura routes data from the disks 21 through the data bus 28 and to a channel processor of a different cluster. But Kitamura has no ability to select a data path between the disks 21 and the ports 231, as specified in the claims as amended.

The discussion in Kitamura that was relied upon by the Examiner relates to selecting a suitable storage device based on the data access rate of the device. For example, at col. 6, lines 33-42, Kitamura describes specifying a storage device for connection in terms of the device access rate, such as whether the device is a low-speed device or a high-speed device. In Kitamura, there is no ability for knowing communication speed information of the data paths, and there is no configuration table to provide such information. Thus, Applicants assert that claims 23-27 and 29-33 are not anticipated by Kitamura and will be in condition for allowance after entry of this Second Amendment After Final.

The Obviousness Rejection over Kitamura and Napolitano

With respect to the Section 103 rejection of claim 28, it is submitted that neither Napolitano nor any of the other cited art can make up for the deficiencies of Kitamura. Any such proposed combination would not be successful, because Kitamura has not ability to know, or do anything with, communication speed information. Even if such a combination could be implemented, it would still fail to teach or suggest the claimed path selection to storage devices based on connection speed of the path itself, because Kitamura does not operate in such fashion. Moreover, there is no demonstration that the references themselves would contain a motivation for making the proposed combination. Therefore, no *prima facie* case of obviousness has been provided, and claim 28 is not rendered obvious in view of the proposed combination.

CONCLUSION

In view of the foregoing, Applicants believe that all claims now pending in this Application will be in condition for allowance after entry of this draft Second Amendment After Final. Withdrawal of the rejection and allowance of the pending claims are respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 858-350-6100.

Respectfully submitted,



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